

## REMARKS

On August 27, 2002, Applicant filed a Power of Attorney (copy of Power and receipt attached) that changed the correspondence address for this case to:

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The Final Rejection was improperly sent to the previous correspondence address. Applicant requests that the PTO correct the correspondence address for this case in accordance with Applicant's August 27, 2002 submission and that all future communications be sent directly to the above correspondence address. Applicants respectfully request allowance of the claims or restart of the period for response to the Final Rejection.

Claims 1 to 7, 10 and 16 to 36 are pending. Reconsideration and allowance of claims 1 to 7, 10 and 16 are respectfully requested for the following reasons:

Claims 1 to 7, 10 to 11 and 16 were rejected under U.S.C. §112, first paragraph (first 112 first paragraph rejection) and claims 1 to 7, 10 to 12 and 16 were rejected under U.S.C. §112, first paragraph (second 112 first paragraph rejection).

#### I. CLAIM REJECTIONS UNDER U.S.C. §112, FIRST PARAGRAPH

As to the first 112 first paragraph rejection, the Office Action states that:

The rejection was not made over claim 12 because the reactants and products are clearly specified in claim 12 i. e., "admits transport of oxygen and carbon monoxide and prohibits transport of a diaryl carbonate."

Final Rejection, page 8.

Claim 1 has been amended to incorporate the language of claim 12 relating to a film that "selectively admits transport of oxygen and carbon monoxide and prohibits

transport of a diaryl carbonate.” The amendment should overcome the first 112 first paragraph rejection.

As to the second 112 first paragraph rejection, the Office Action states that:

the specification, while being enabling for an apparatus comprising a single substrate composed of one type of material (e.g., polycarbonate), does not reasonably provide enablement for a single substrate composed of more than one type of material (e.g., once [sic, one] cell is composed of polycarbonate, another cell is composed of polyester). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims (see as an example claim 15) stating, “wherein at least one cell is a cell is [sic] formed from a polycarbonate substrate” implying that each cell may be made of a different material).

Final Rejection, pages 9 to 10.

Additionally at page 14, with regard to the second 112 first paragraph rejection, the Final Rejection states:

The newly amended claims do not overcome this rejection because the amendment does NOT narrow the broad claims or alleviate their unpredictable nature. The statement in amended claim 1, “wherein the at least one cell is a cell that is formed from a polycarbonate substrate with two opposing walls” still permits the possibility that “another” cell may be composed of a different material. Consequently, the previous arguments in their entirety still apply i.e., the amendment simply does not address the issue.

Claim 1 has been amended to specify that “each of the cells is formed from a polycarbonate substrate.” The amendment removes the implication that “each cell may be made of a different material.” This is the only “aspect” of the second 112 first paragraph rejection that the Final Rejection has identified. Addressing this “aspect” by amendment of claim 1 to specify that “each of the cells is formed from a polycarbonate substrate” should overcome the second 112 first paragraph rejection.

## II. CLAIMS REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1 to 7, 10 to 12 and 16 were rejected under U.S.C. §112, second paragraph.

### 1. FINAL REJECTION PARAGRAPHS A TO D

The Final Rejection states that “reactor plate” (paragraph A), “substrate” (paragraph B), “reaction cells” (paragraph C) and “substrate with an array of reaction cells” (paragraph D) are not defined in the specification and are indefinite. However, the terms “reactor plate,” “substrate,” “reaction cells” and “substrate with an array of reaction cells” are defined in the specification. See the specification page 2, lines 19 to 25, page 4, lines 6 to 26 with reference to the drawings, page 8, lines 1 to 12 and the drawings, FIGs. 1 to 5. Additionally, the terms “reactor plate,” “substrate,” “reaction cells” and “substrate with an array of reaction cells” are well-known terms in the combinatorial art. See for example, Cherukuri et al., 5,980,704.

The Final Rejection responded:

how does the term “reactor” in the phrase ‘reactor plate’ limit the scope of the invention?” Furthermore, how does the word “plate” limit the scope of the invention?

Applicant fails to understand what the Final Rejection means in this respect. The term in question is “reactor plate,” not “reactor” or “plate” alone. Reference to the well-known meaning of “reactor plate” in the combinatorial art, limits the scope in this respect, to the well-known meaning of “reactor plate.” See Cherukuri et al., 6,331,439, Cherukuri et al., 5,980,704 and Cherukuri et al., 5,603,351. A quick search of the PTO patent data base reveals over 100 patents that use the term. The specification shows several “reactor plates.” The specification at least at page 2, lines 19 to 20, defines a “reactor plate” as comprising “a substrate with an array of reaction cells and a permeable film covering at least one of the cells.” This basis of the 35 U.S.C. §112, second paragraph rejection should be withdrawn.

Similarly, the term “substrate” is well known. Again, see Cherukuri et al., 5,980,704. The specification shows examples of “supporting substrate(s)” in the drawings. A “substrate” is known as a “substratum,” which is an “underlying support : FOUNDATION,” Merriam-Webster’s Collegiate Dictionary, 10<sup>th</sup> Ed., p. 1174 (1993). A quick search of the PTO patent data base reveals thousands of patents that use the term in the context of combinatorial chemistry.

Similarly, the terms “reaction cells” and “array” and “substrate with an array of reaction cells” are well known in the combinatorial art. See Cherukuri et al., 6,331,439, Cherukuri et al., 5,980,704 and Cherukuri et al., 5,603,351. Similarly, “reaction cells” and “substrate with an array of reaction cells” are defined in the specification with reference to the drawings.

35 U.S.C. §112, second paragraph, provides:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Under 35 U.S.C. §112, second paragraph, the claims read in light of the specification need only apprise those skilled in the art of the scope of the invention. *Hybritech v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1387, 231 USPQ 81, 94, 95 (Fed. Cir. 1986), cert. denied 480 US 947 (1987).

One skilled in the combinatorial chemistry art is apprised of the scope of the terms “reactor plate,” “substrate,” “reaction cells” and “substrate with an array of reaction cells” in view of the dictionary definitions and common use of the terms in prior combinatorial patents and definitions in the specification text and drawings.

The Final Rejection argues:

The Examiner's position is that the specification as indicated by applicant does not define said terms, but merely provides examples in which the terms are used.

Final Rejection page18.

But, examples contribute to definition. And further, the specification definitions are not limited to the Examples. See the specification page 2, lines 19 to 25, page 4, lines 6 to 26 and page 8, lines 1 to 12. Further, whatever is lacking in the specification with regard to apprising one skilled in the art of the scope of the claims is provided by the known meaning of the terms in the combinatorial chemistry art.

The Final Rejection also argues:

Furthermore, the Examiner contends that these terms are not "well known" in the art and that merely providing an example of a patent wherein the terms are used does not make those terms well known. Furthermore, even assuming *arguendo* that said terms are defined and/or well known in the art, applicant has not addressed the ambiguities that were set forth in the previous office action. Applicant did not explain how the specification or literature remedies the stated ambiguities.

Final Rejection pages 18 to 19.

First, what the Examiner "contends" is not determinative of whether claims meet the requirements of 35 U.S.C. §112, second paragraph. The proper legal standard to determine conformity with 35 U.S.C. §112, second paragraph is whether one skilled in the art need be apprised of the scope of the invention. *Hybritech v. Monoclonal Antibodies, Inc., supra*.

Second, while applicants may have overstated the "well known" showing of the cited patent (now patents), a patent indeed is evidence of "known in the art." It is stated to be intrinsic evidence of what is known in the art. *See Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216, 36 USPQ2d 1225, 1228 (Fed. Cir. 1995). Establishing what is known in the art as evidenced by patents together with dictionary definitions and specification definitions, establishes whether one skilled in the art would be apprised of the scope of the invention. If the PTO disagrees, the PTO is specifically requested to state the different standard for determining conformity to the requirements of 35 U.S.C. §112, second paragraph.

Third, if by "ambiguous," the PTO means "capable of being understood in two or more possible senses or ways," then the PTO is requested to point out its legal authority

for this rejection. “Capable of being understood in two or more possible senses or ways” is not objectionable under 35 U.S.C. §112, second paragraph. It merely means breadth of claim language. On the other hand, if the PTO means “unclear” by “ambiguous,” the PTO is incorrect. If the terms are known in the art, the terms, by definition are not unclear to one skilled in the art.

The A to D basis for 35 U.S.C. §112, second paragraph rejection should be withdrawn.

## 2. FINAL REJECTION PARAGRAPHS E TO F and H to I

The Final Rejection withdraws the paragraphs E to F and H to I based rejections.

## 3. FINAL REJECTION PARAGRAPH G

The present amendments delete the paragraph G objectionable “about,” preferably “about” and “desirably about” terminology. The amendments should overcome the paragraph G based rejection.

## 4. FINAL REJECTION PARAGRAPH J

The Final Rejection states:

... the phrase “wherein the at least one cell is a cell is [sic] formed from a polycarbonate substrate” is still indefinite.... [I]t is still not clear whether applicant means that a “substrate with an array of reaction cells” can be composed of more than one material e.g., one cell is made of polycarbonate while another cell is made of say polyester?

Final Rejection page 20.

Claim 1 has been amended to delete “the at least one cell is a cell that.” Claim 1 now reads: --wherein each of the cells is formed from a polycarbonate substrate....-- The amendment makes clear that each cell is made of polycarbonate. The paragraph J based rejection should be withdrawn.

For the above reasons, the rejection of claims 1 to 7, 10 to 12 and 16 under U.S.C. §112, second paragraph should be withdrawn.

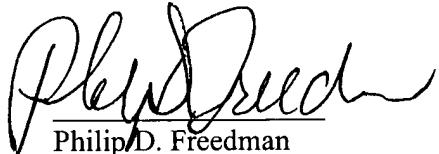
The withdrawal of the rejections of claims 1 to 8, 12 to 14 and 16 under U.S.C. §102(b) over Valus et al. and claims 1 to 14 under U.S.C. §102(e) over Hirahara are noted and appreciated.

The above amendments clarify the structure of the claimed well system and the function of the claimed monitoring method. In view of the miss-sent Final Rejection, the Amendment should be entered, the claims allowed or the Final Rejection reissued, addressing the amendments and restarting the period for response. The amendments place the application in condition for allowance or better condition for appeal. Thus, entry of the Amendment is requested under 37 CFR §1.116.

In view of the foregoing amendments and remarks, it is respectfully submitted that claims 1 to 7, 10 to 12 and 16 are allowable. Reconsideration and allowance are requested.

Should the Examiner believe that any further action is necessary in order to place this application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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JAN 24, 2003

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (twice amended) A reactor plate for the catalytic production of aromatic carbonates, comprising:

a substrate with an array of reaction cells; and

a permeable polycarbonate film covering [at least one of] the cells to selectively permit transport of a reactant gas into the one cell while preventing transport of a reaction product out of the [one cell] cells;

wherein the permeable polycarbonate film selectively admits transport of [a reactant but prohibits transport of a reaction product] oxygen and carbon monoxide and prohibits transport of a diaryl carbonate; and

wherein [the at least one cell is a cell that] each of the cells is formed from a polycarbonate substrate with two opposing walls comprising permeable polycarbonate film.

2. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is characterized by a diffusion coefficient of [about]  $5 \times 10^{-10}$  to [about]  $5 \times 10^{-7}$  cc(STP)-mm/cm<sup>2</sup>-sec-cmHg.

3. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is characterized by a diffusion coefficient of [about]  $1 \times 10^{-9}$  to [about]  $1 \times 10^{-7}$  cc(STP)-mm/cm<sup>2</sup>-sec-cmHg.

4. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is characterized by a diffusion coefficient of [about and preferably about]  $2 \times 10^{-8}$  to [about]  $2 \times 10^{-6}$  cc(STP)-mm/cm<sup>2</sup>-sec-cmHg.

5. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is [about] .0002 to [about] .05 mm thick.

6. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is [about] .005 to [about] .04 mm thick.

7. (twice amended) The reactor plate of claim 1, wherein the permeable polycarbonate film is [, desirably about] .01 to [about] .025 mm thick.